

# TECHNICAL INFORMATION



PRODUCT

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**Models No.** ▶ BHS630 (LXSH01\*1)

**Description** ▶ 165mm (6-1/2") Cordless Circular Saw  
\*1 Model number for North and Central American countries

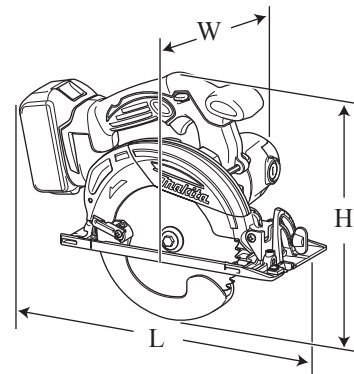
## CONCEPT AND MAIN APPLICATIONS

Model BHS630 is a 165mm (6-1/2") Cordless Circular Saw powered by 18V/3.0Ah Li-ion battery Model BL1830.

Its main features are:

- Able to cut up to 66mm (2-5/8") thick wood with a single stroke, which no competitors' 18V models can do.
- In spite of compact and lightweight design, performs the same smooth and comfortable cutting as AC circular saws.
- Compatible with 18V Li-ion battery of BL1830 equipped with the battery protection circuit designed to protect the battery from damages due to overdischarge, high temperature or overload current.
- High maneuverability provided by Good tool balance, Twin LED light, Blower function and Fine parallel adjustment of base plate.

**Note:** 1.3Ah Li-ion battery of BL1815 cannot be used for this model.



| Dimensions: mm (") |              |
|--------------------|--------------|
| Length (L)         | 346 (13-5/8) |
| Width (W)          | 220 (8-5/8)  |
| Height (H)         | 247 (9-3/4)  |

This model is available in the following variations.

| Model No.          | Battery |          | Battery cover | Charger | Plastic carrying case | Housing color |
|--------------------|---------|----------|---------------|---------|-----------------------|---------------|
|                    | Type    | Quantity |               |         |                       |               |
| BHS630RFE (LXSH01) | BL1830  | 2        | 1             | DC18RC  | Yes                   | Makita-blue   |
| BHS630Z (LXSH01Z)  | ---     | ---      | ---           | ---     | ---                   | Makita-blue   |

All models also include the accessories listed below in "Standard equipment".

### ► Specification

|  |                               |  |
|--|-------------------------------|--|
| Battery  | Voltage:V                     | 18   |
|  | Capacity:Ah                   | 3.0  |
|  | Cell                          | Li-ion   |
|  | Charging time (approx.): min. | 15/ 22 with DC18RC   |
| Max output (W)   |                               | 730  |
| No load speed: min-1=rpm                               |                               | 3,100  |
| Blade size: mm (")                                     | Diameter                      | 165 (6-1/2)  |
|  | Hole diameter                 | North America: 15.88 (5/8)<br>All countries except North America: 20 |
| Max cutting capacities: mm (")                         | at 0°                         | 66 (2-5/8)   |
|  | at 45°                        | 46 (1-13/16)   |
| Electric brake   |                               | Yes  |
| Job light  |                               | Yes (Twin LED light)   |
| Weight according to EPTA-Procedure 01/2003*2: kg (lbs) |                               | 3.5 (7.7)  |

\*Includes TCT Saw Blade, Battery BL1830 and Dust nozzle

### ► Standard equipment

|   |   |
|---|---|
| TCT Saw blade 165mm (6-1/2")              | 1 |
| Hex wrench 5                              | 1 |
| Rip fence                                 | 1 |
| Dust nozzle (for European countries only) | 1 |

**Note:** The standard equipment for the tool shown above may vary from country to country.

### ► Optional accessories

|                           |                               |                             |
|---------------------------|-------------------------------|-----------------------------|
| Fast charger DC18RC       | Battery BL1830                | Safety goggles              |
| Charger DC18SD            | 165mm (6-1/2") TCT Saw Blades | Guide rail adapter          |
| Charger DC24SC            | Dust nozzle                   | Various parts of guide rail |
| Automotive charger DC18SE | Rip fences                    |                             |

## ► Repair

**CAUTION:** Repair the machine in accordance with “Instruction manual” or “Safety instructions”.

### [1] NECESSARY REPAIRING TOOLS

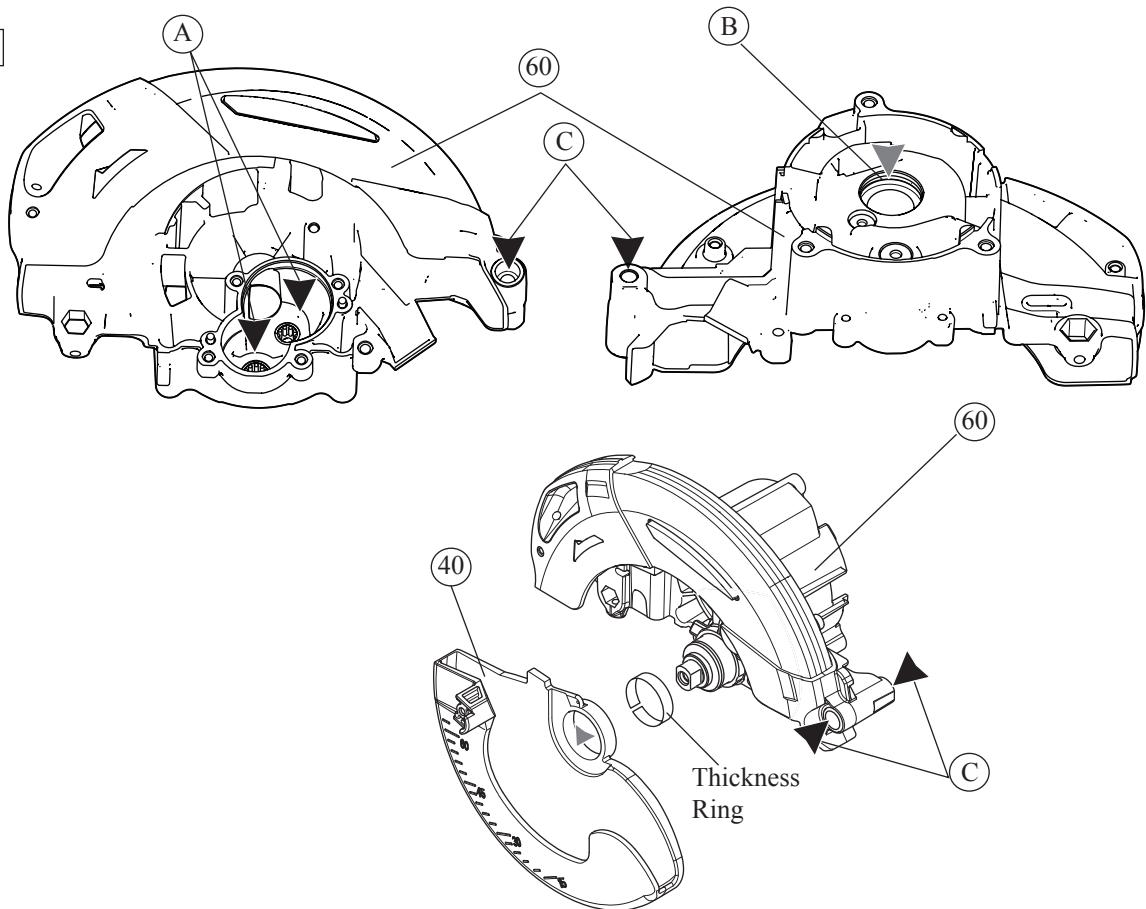
| Code No. | Description                      | Use for   |
|----------|----------------------------------|---|
| 1R003    | Retaining ring S pliers ST2N     | removing / mounting Retaining ring WR-26          |
| 1R031    | Bearing setting pipe 28-20.2     | holding Bearing box when removing Helical gear 24 |
| 1R208    | 90 degree set square             | adjusting the angle of Saw blade to 90 Degrees    |
| 1R212    | Tip for Retaining ring pliers    | attachment to 1R003                               |
| 1R263    | Bearing extractor                | removing Blade cover                              |
| 1R269    | Bearing extractor                | removing Ball bearings                            |
| 1R291    | Retaining ring S & R pliers      | removing Retaining ring S-10 from Spindle         |
| 1R361    | Bearing retainer tightening tool | removing / Mounting Bearing retainer 14-23        |

### [2] LUBRICATIONS

Apply the following grease and Lubricant to the portions pointed with triangles to protect parts and product from unusual abrasion.

| Item No.        | Description  | Portion to lubricate                         | Lubricant               | Amount   |
|-----------------|--|--|-------------------------|----------|
| ⑥0              | Blade case complete                                  | Ⓐ Gear room where Gears engage each other    | Makita grease SG No.0 ▼ | 8 g      |
|                 |  | Ⓑ O ring 24                                  | Lubricant VG100 ▼       |          |
|                 |  | Ⓒ Pivot portion where Angular guide contacts | Makita grease SG No.0 ▼ |          |
| ④0 Safety cover | Inside of Ring portion where Thickness ring contacts |  |                         | a little |

**Fig. 1**



## ► Repair

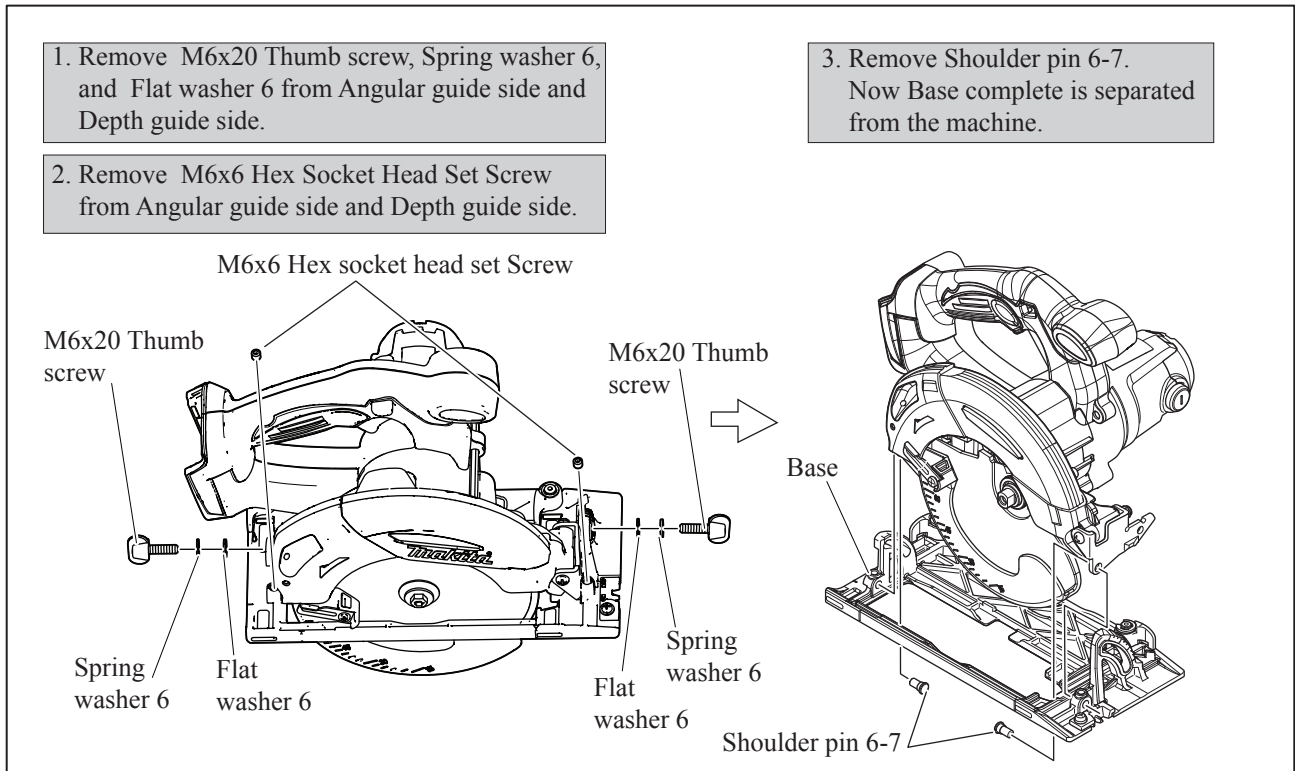
### [3] DISASSEMBLY/ASSEMBLY

#### [3]-1. Base

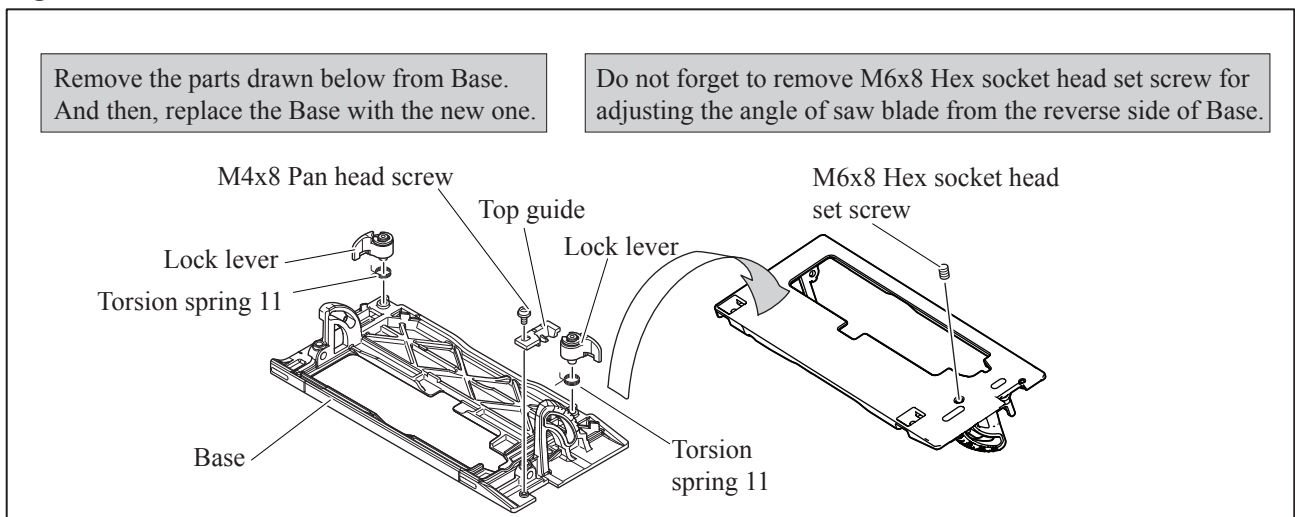
##### DISASSEMBLING

Base can be separated from the machine as drawn in **Figs. 2** and **3**.

**Fig. 2**



**Fig. 3**



##### ASSEMBLING

Take the reverse step of Disassembling. Refer to **Fig. 3**, **Fig. 2**.

##### Note in Assembling

1. After mounting Lock lever, its adjustment is required to obtain the correct lock position for guide rule, mounted to Base. See "[3]-2. Lock Lever".
2. After mounting Base to the machine, adjustment of angle of saw blade to the Base is required. See "[4] Adjustment"

► **Repair**

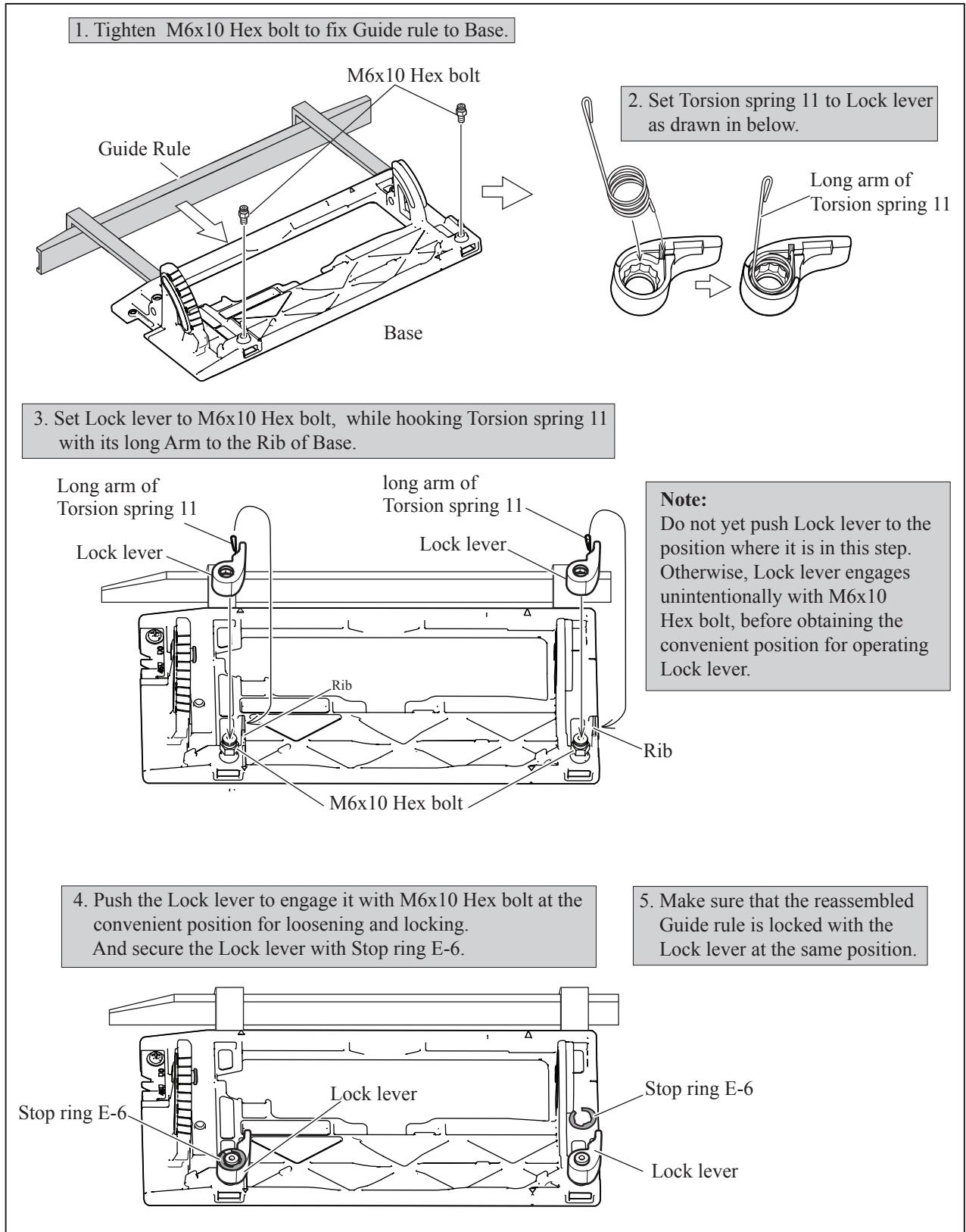
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-2. Lock Lever**

**ASSEMBLING**

Assemble Lock lever to Base, and adjust to obtain the convenient lock position as drawn in **Fig. 4**.

**Fig. 4**



► **Repair**

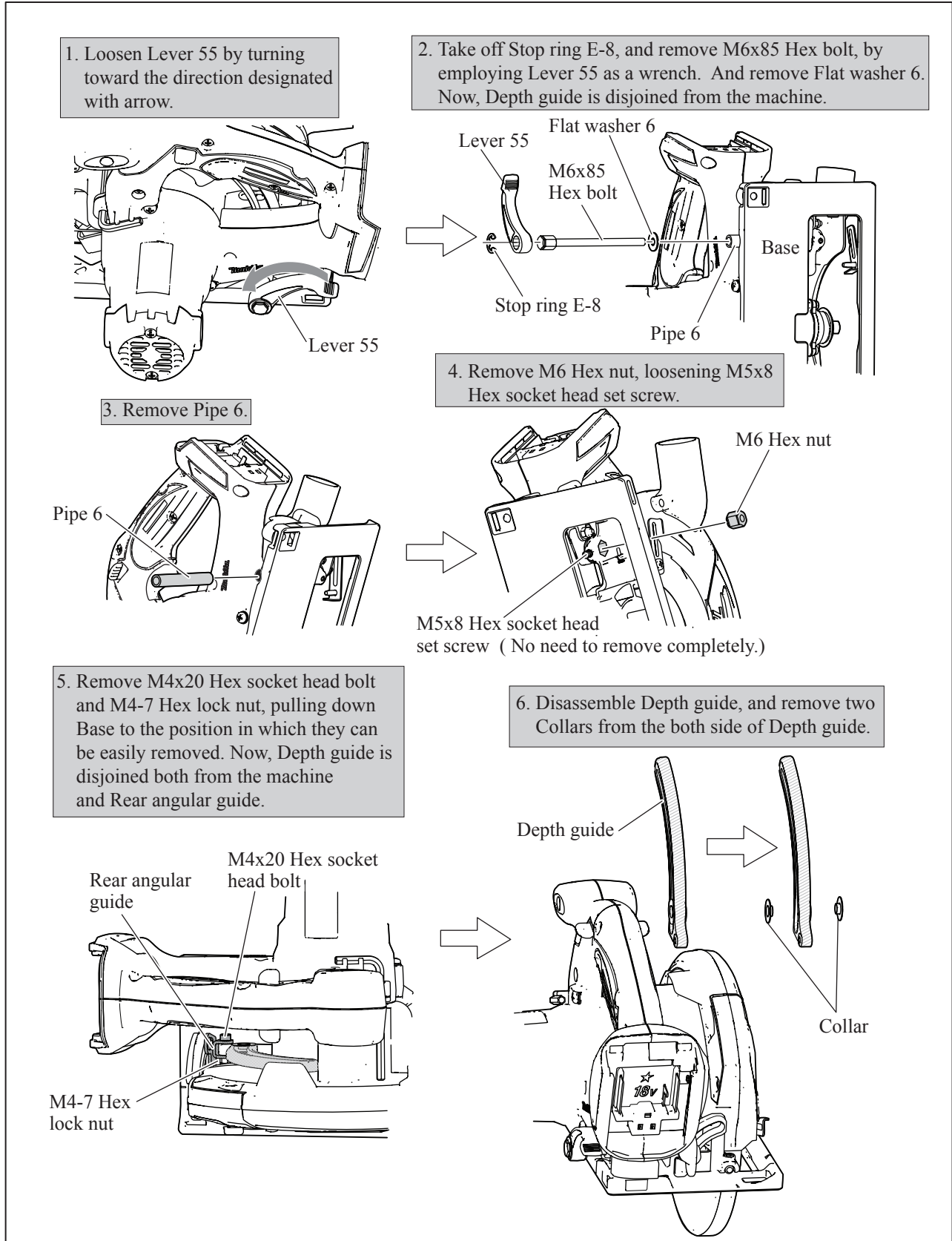
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-3. Depth Guide**

DISASSEMBLING

Depth guide is joined to the Machine at the Handle section, and to Base at Rear angular guide. Separate Depth guide by disassembling from Handle section and from Rear angular guide as drawn in **Fig. 5**.

**Fig. 5**



► **Repair**

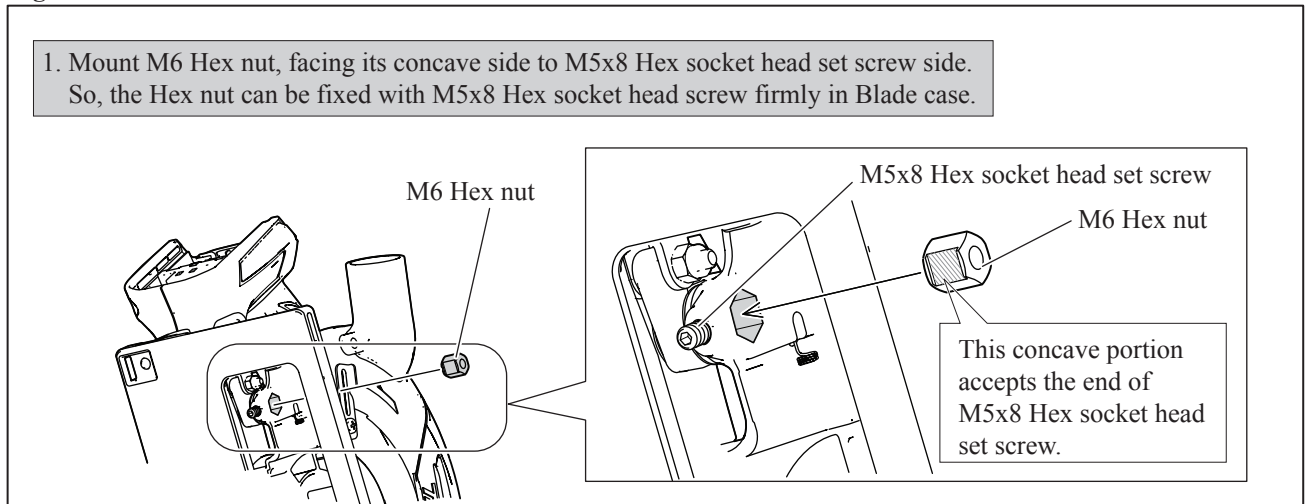
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-3. Depth Guide**

ASSEMBLING

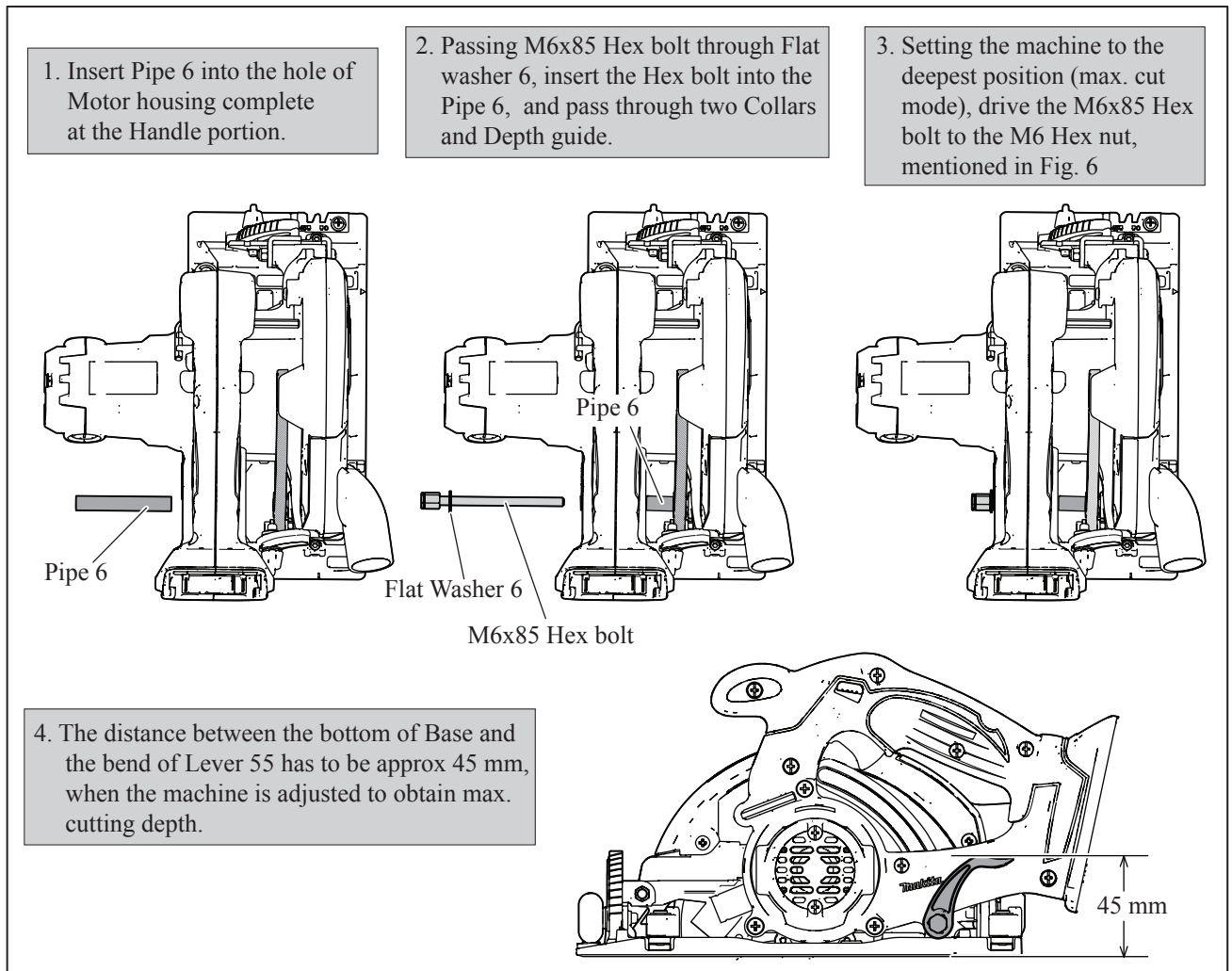
1. Assemble Depth guide to Rear angular guide by tightening with M4x20 Hex socket head bolt and M4-7 Hex lock nut. Refer to the **bottom left** illustration in **Fig. 5**.
2. Set Collar to the both side of the Depth guide. Refer to the **bottom right** illustration in **Fig. 5**.
3. Mount M6 Hex nut to Blade case as illustrated in **Fig. 6**.

**Fig. 6**



4. Proceed the assembling as drawn in **Fig. 7**.

**Fig. 7**



## ► Repair

### [3] DISASSEMBLY/ASSEMBLY

#### [3]-4. Angular Guide

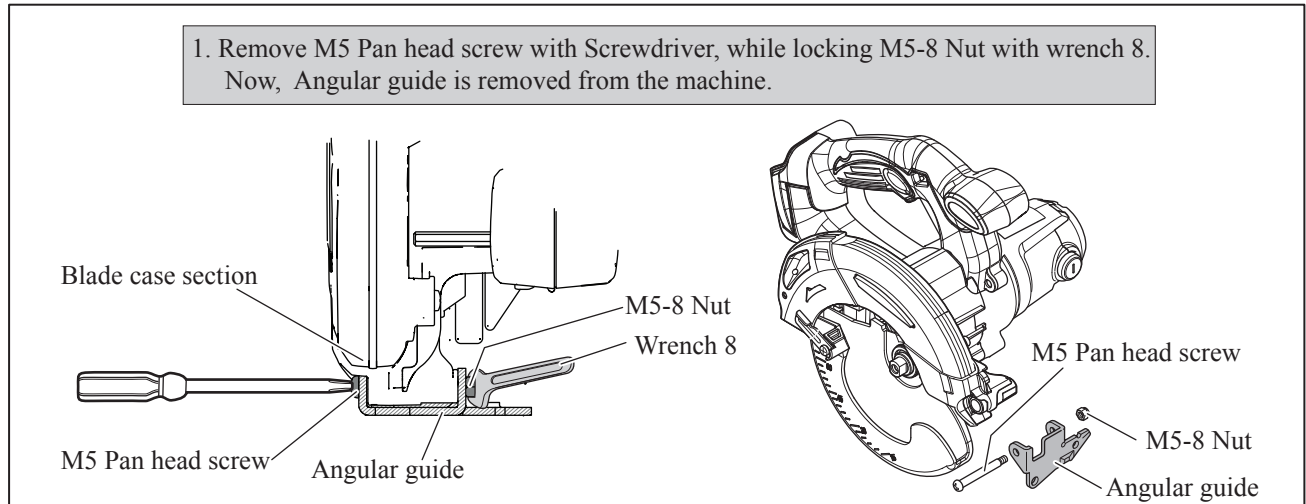
##### DISASSEMBLING

Angular guide is fixed to the machine at the following 3 positions.

1. at the hinge portion fixed with Shoulder pin 6-7 and M6x6 Hex socket head set screw
2. at Angular plate on Base with M6x20 Thumb screw, Flat washer 6 and Spring washer 6
3. at Blade case section with M5 pan head screw and M5-8 Nut.

- (1) Make Angular guide free at hinge portion and Angular plate portion as drawn in **Fig. 2**.
- (2) Make the Angular plate free from the Blade case section as drawn in **Fig. 8**.

**Fig. 8**



##### ASSEMBLING

Assemble Angular guide, referring to **Fig. 2**.

#### [3]-5. LED and Motor Section

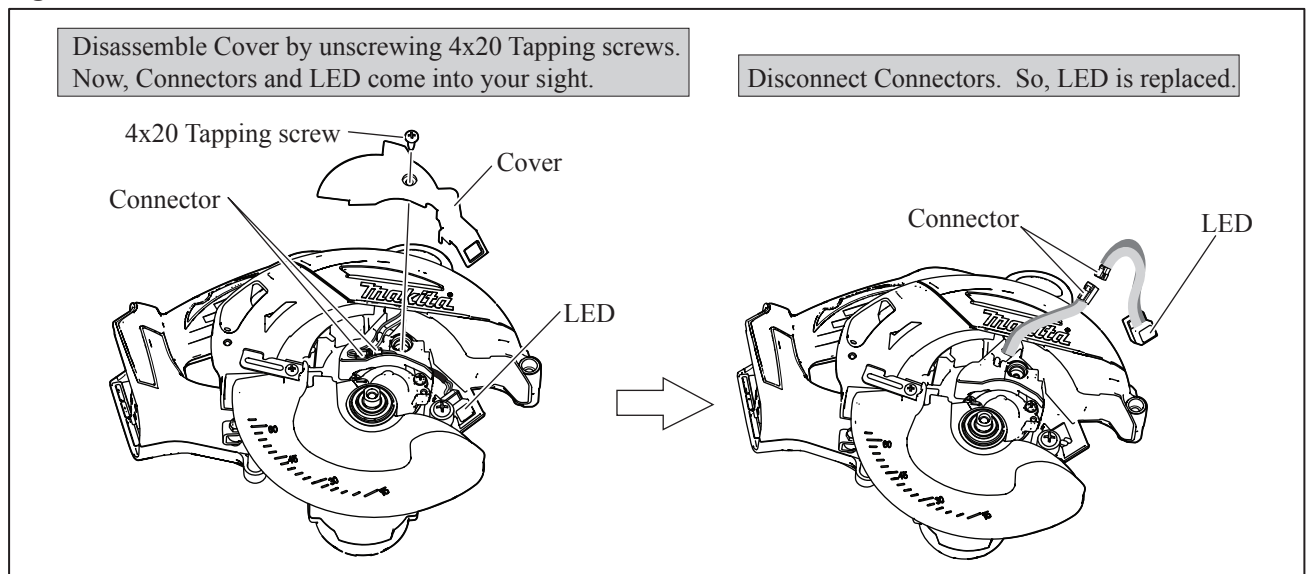
##### DISASSEMBLING

The machine is joined to Base at the following 2 positions.

1. at the hinge portion of Blade case ( at the front side of Blade case) with Angular guide
2. at the Handle section of Motor housing complete with Depth guide

- (1) Remove Lever 55 and M6x85 Hex bolt as per the **top right** drawing in **Fig. 5**.  
Now the machine is free from Depth guide.
- (2) Make the machine free from Angular guide as illustrated in **Fig. 8**.  
Now the machine is separated from Base completely. And disassemble LED as drawn in **Fig. 9**.

**Fig. 9**



► **Repair**

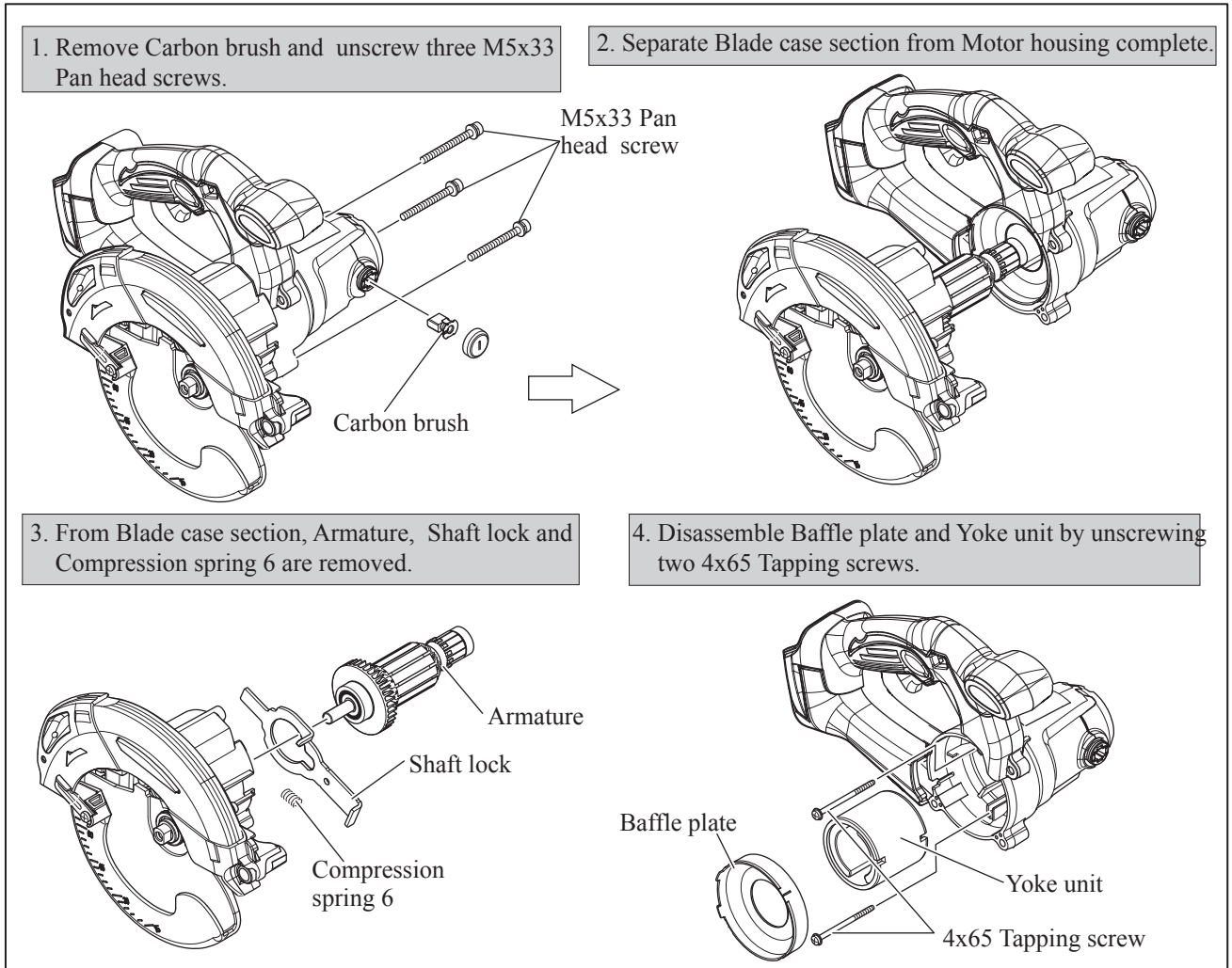
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-5. LED and Motor Section**

**DISASSEMBLING**

(3) Armature and Yoke unit can be replaced as drawn in **Fig. 10**.

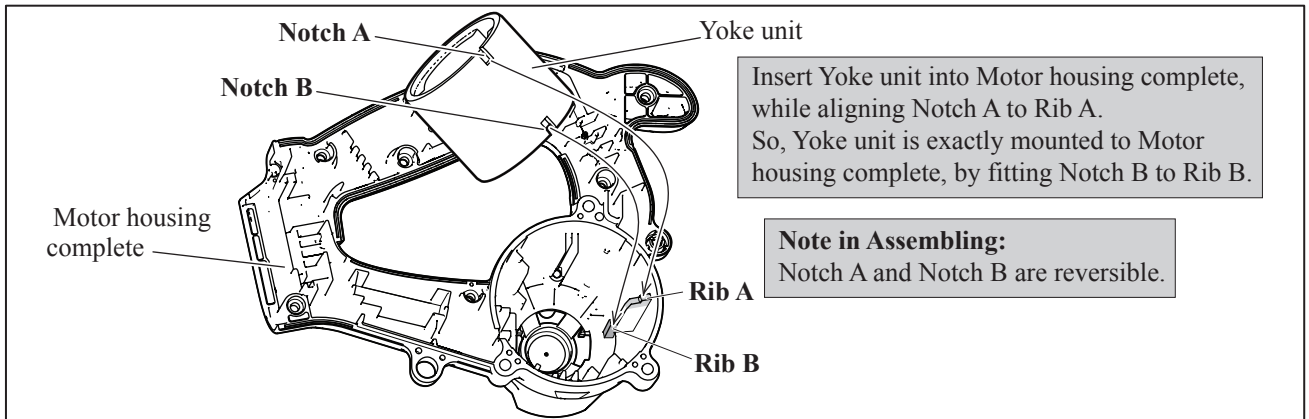
**Fig. 10**



**ASSEMBLING**

(1) Assemble Yoke unit to Motor housing complete as illustrated in **Fig. 11**.

**Fig. 11**



(2) Assemble Motor section by tasking the reverse step of Disassembling. Refer to **Fig. 10**.

**Note in Assembling:**

Do not forget to assemble Shaft lock and Compression spring 6. Refer to the **lower left** drawing in **Fig. 10**.



► **Repair**

**[3] DISASSEMBLY/ASSEMBLY**

**[3]-6. Blade Case Complete**

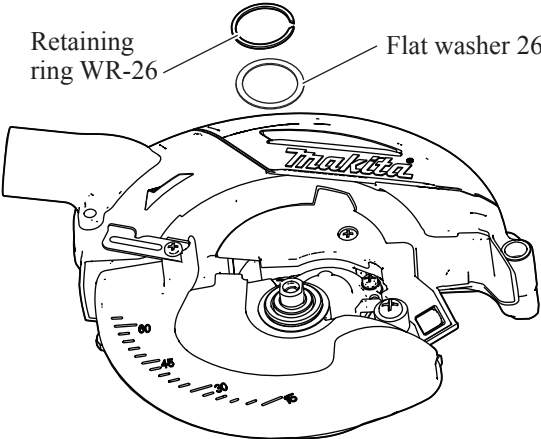
DISASSEMBLING

- (1) Remove Lever 55 and M6x85 Hex bolt as per the **top right** drawing in **Fig. 5**.  
Now the machine is free from Depth guide.
- (2) Make the machine free from Angular guide as drawn in **Fig. 8**.  
Now the machine is separated from Base completely.
- (3) Separate Blade case as per the **upper left, upper right and lower left** drawings in **Fig. 10**.
- (4) Disassemble Safety cover and Gear section from Blade case as drawn in **Fig. 12**.

**Fig. 12**

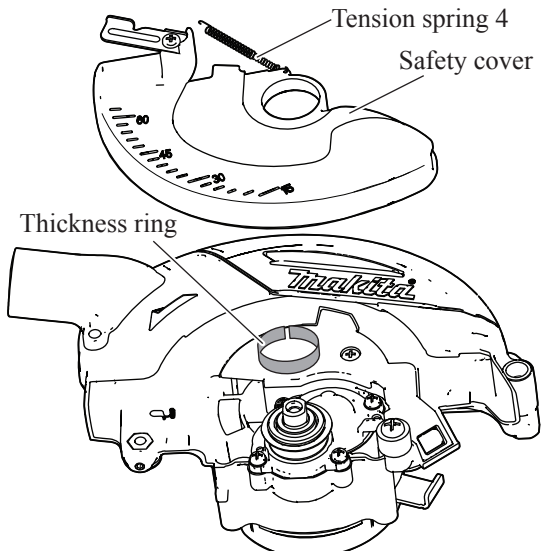
1. Remove retaining ring WR-26 and Flat washer 26. Use 1R003 equipped with Claw of 1R212, when removing retaining ring WR-26.

<Note in Disassembling>  
Hold the Retaining ring with your gloved hand so that it does not spring when removing.



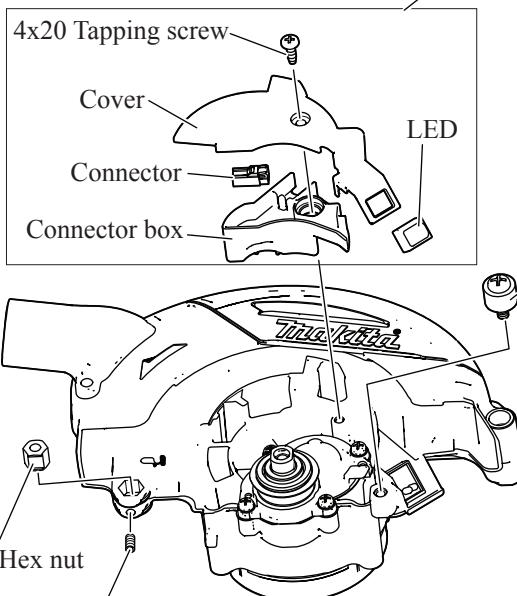
Retaining ring WR-26      Flat washer 26

2. Remove Safety cover, Tension spring 4 and Thickness ring.



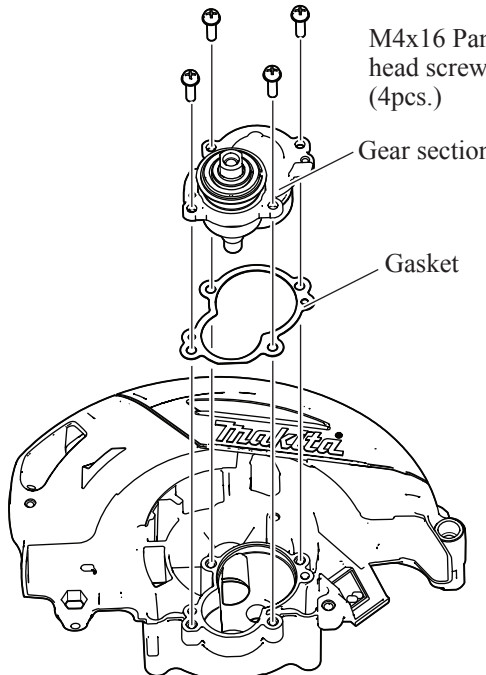
Tension spring 4  
Safety cover  
Thickness ring

3. Remove the parts of LED section, Rubber sleeve 6, M5-8 Hex socket head set screw and M6 Hex nut.



LED section  
4x20 Tapping screw  
Cover  
Connector  
Connector box  
Rubber sleeve 6  
M6 Hex nut  
M5-8 Hex socket head set screw

4. Remove Bearing box (Gear section) by unscrewing four M4x16 pan head screws.



M4x16 Pan head screw (4pcs.)  
Gear section  
Gasket

► **Repair**

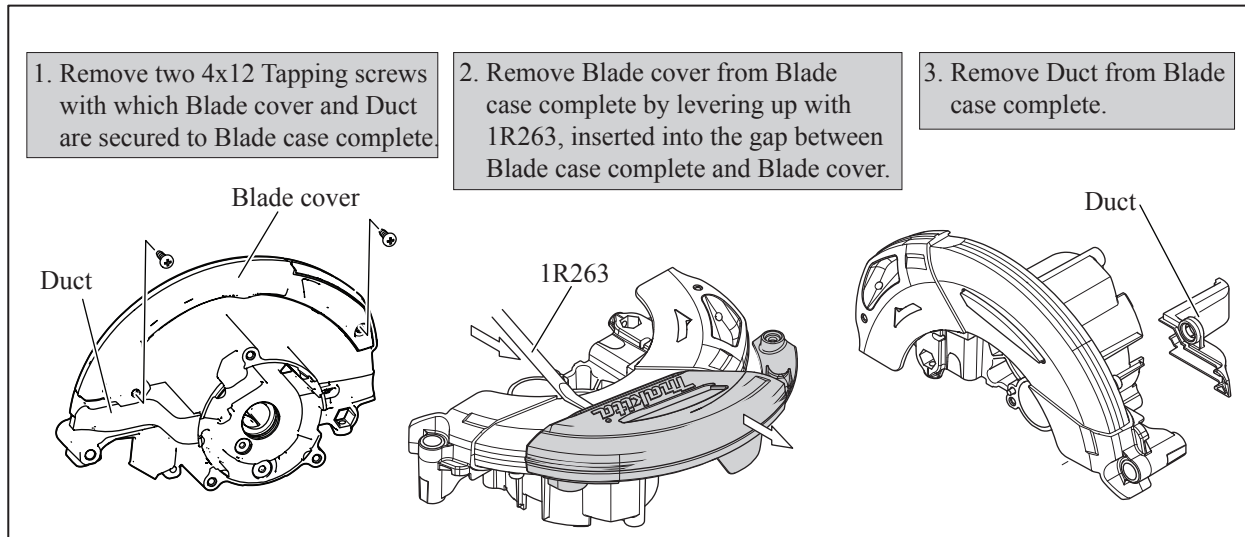
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-6. Blade Case Complete**

DISASSEMBLING

(5) Remove Blade cover and Duct from Blade case complete as drawn in **Fig. 13**.

**Fig. 13**



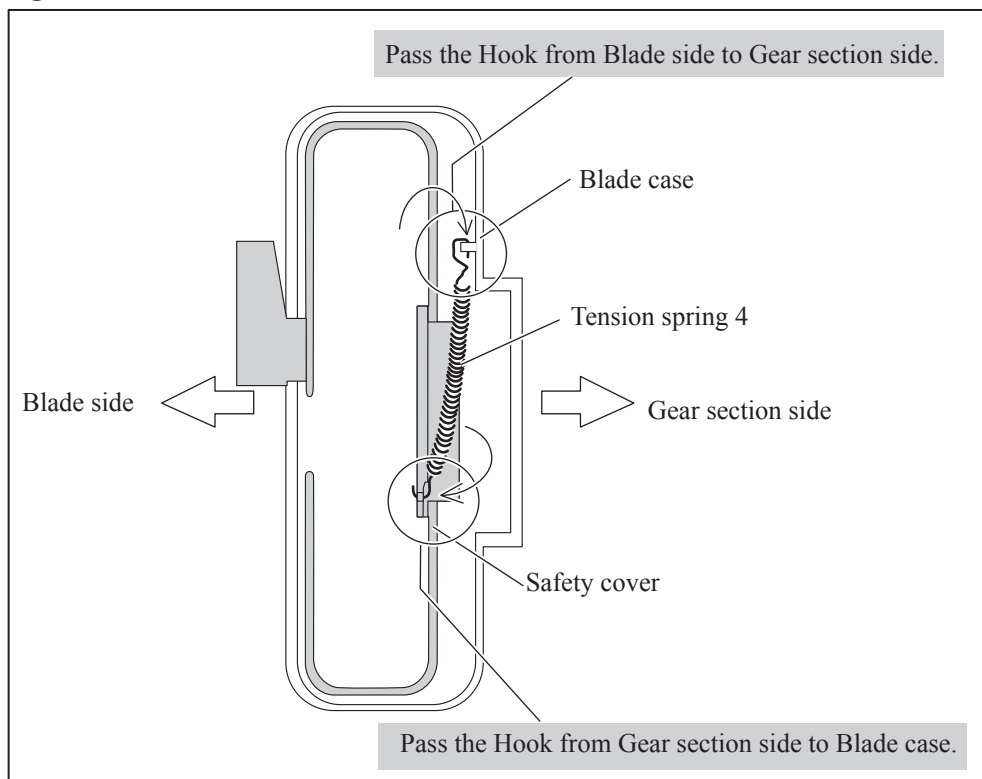
ASSEMBLING

(1) Take the reverse step of Disassembling. Refer to **Figs. 13** and **12**.

**Note in Assembling:**

Tension spring 4 has to be connected to Safety cover and Blade case as drawn in **Fig. 14**.

**Fig. 14**



## ► Repair

### [3] DISASSEMBLY/ASSEMBLY

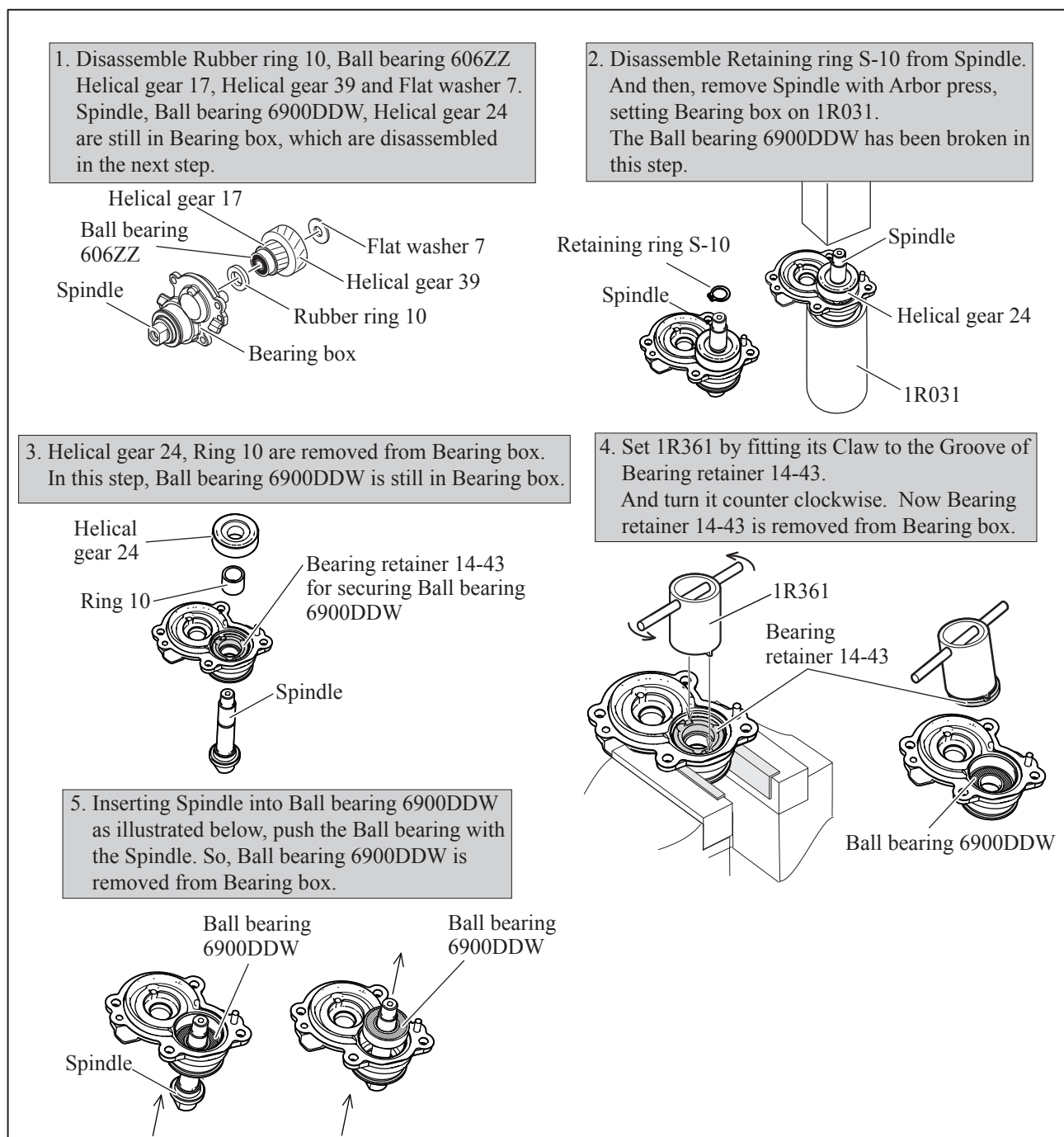
#### [3]-7. Bearing Box (Gear Section)

##### DISASSEMBLING

In case of repairing of Bearing box (Gear section) singly, no need to separate the machine from the Base.

- (1) Remove Safety cover as per the **upper left** and **upper right** drawings in **Fig. 12**.
- (2) Remove Bearing box (Gear section) from Blade case complete as per the **lower right** drawing in **Fig. 12**.
- (3) Now the Bearing box can be disassembled as drawn in **Fig. 15**.

**Fig. 15**



##### ASSEMBLING

Take the reverse step of Disassembling. Refer to **Fig. 15** and **Fig. 12**.

##### Note in Assembling:

Assemble **fresh Ball bearing 6900DDW** instead of the removed one, because the Ball bearing has been broken when removing Spindle from Bearing retainer 14-43.

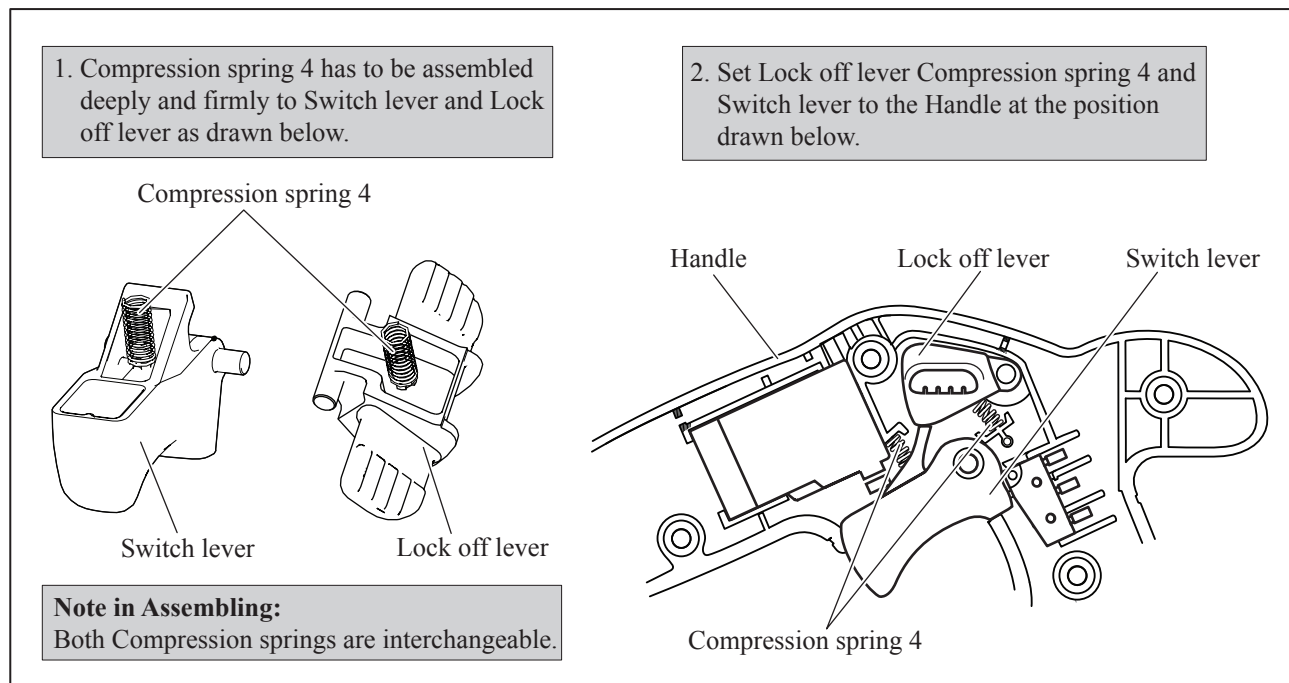
## ► Repair

### [3] DISASSEMBLY/ASSEMBLY [3]-8. Lock Off Lever, Switch Lever

#### ASSEMBLING

Assemble Switch lever and Lock off lever to Handle as illustrated in **Fig. 16**.

**Fig. 16**



## ► Repair

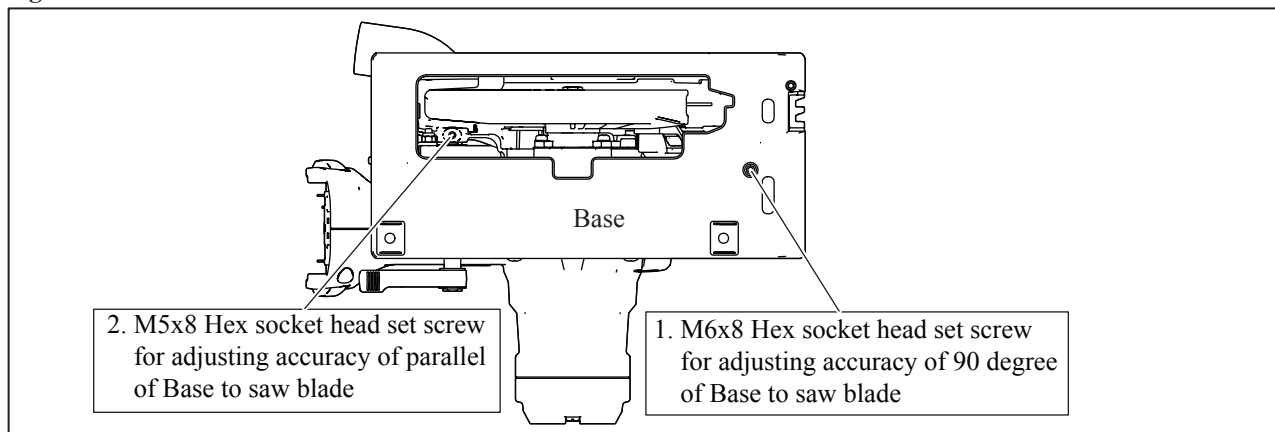
### [4] ADJUSTMENT

Following two kinds of adjustment screws are used in this product.

1. M6x8 Hex socket head set screw for adjusting Accuracy of 90 degrees .
2. M5x8 hex socket head set screw for adjusting Accuracy of Parallel of Base to saw blade

See the following drawing in **Fig. 17**.

**Fig. 17**

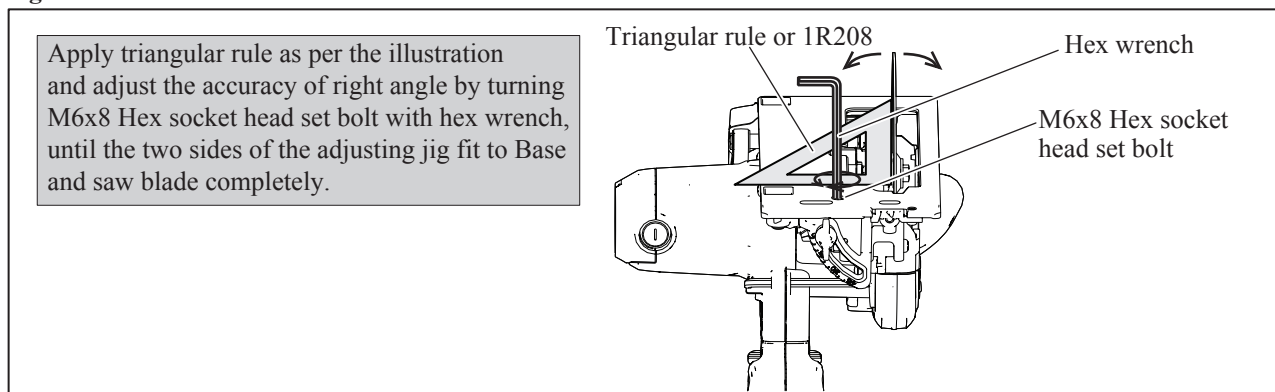


#### [4]-1. Adjusting Accuracy of 90 degree cut

Mounting Saw blade to the machine, set the machine to the lowest possible position to obtain the max. cut depth. But, do not attach Battery to the machine.

Adjust accuracy of 90 degree cut as drawn in **Fig. 18**.

**Fig. 18**

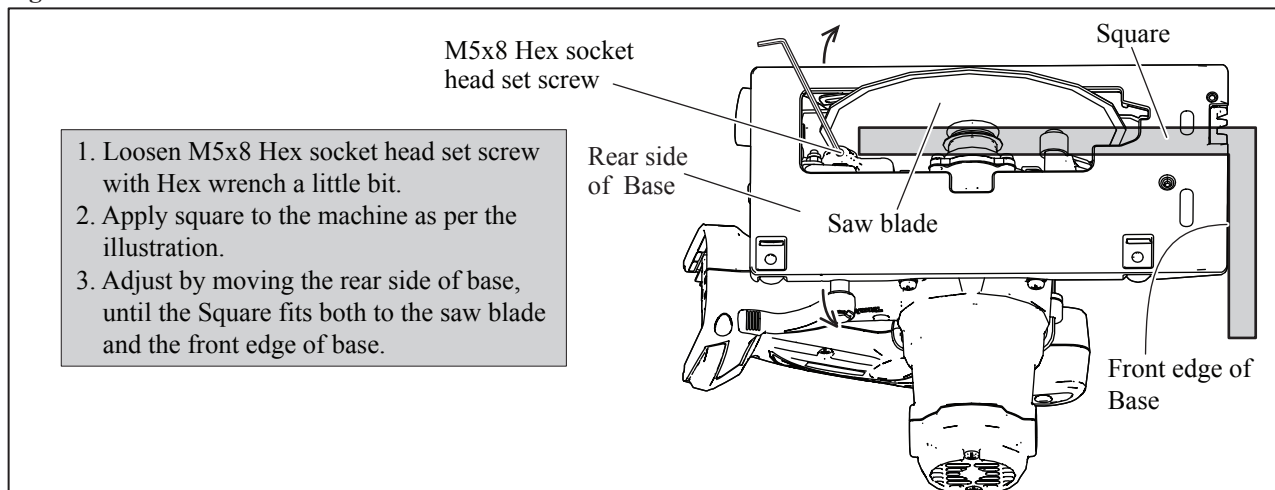


#### [4]-2. Adjusting Accuracy of Parallel of Base to Saw blade

Mounting Saw blade to the machine, set the machine to the lowest possible position to obtain the max. cut depth. But, do not attach Battery to the machine.

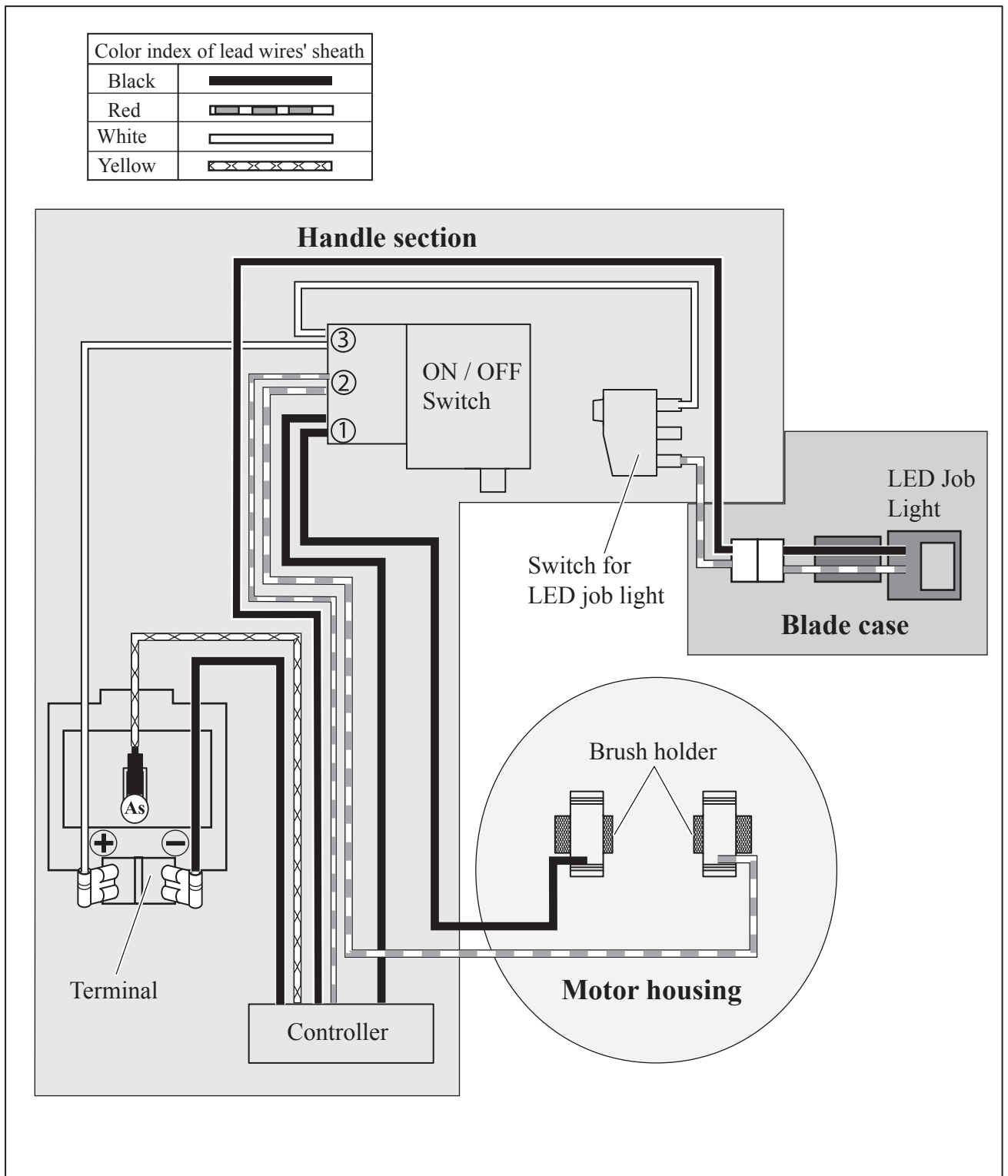
Adjust accuracy of parallel of Base to saw blade as drawn in **Fig. 19**.

**Fig. 18**



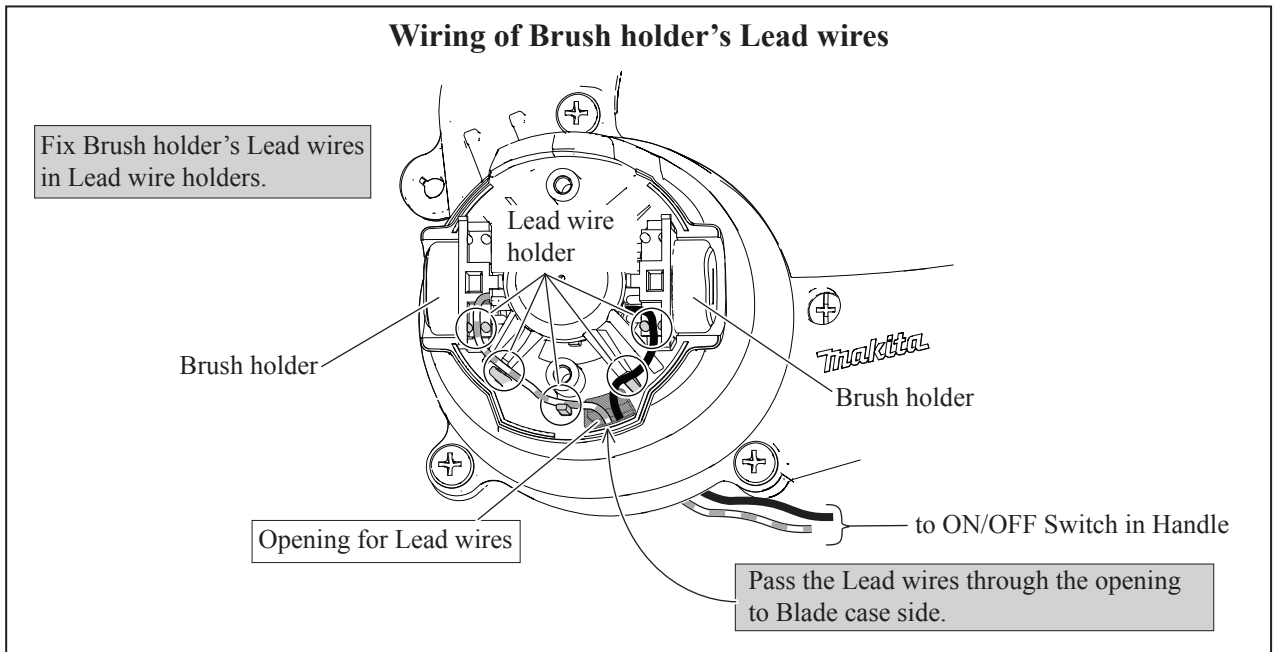
► **Circuit diagram**

**Fig. D-1**

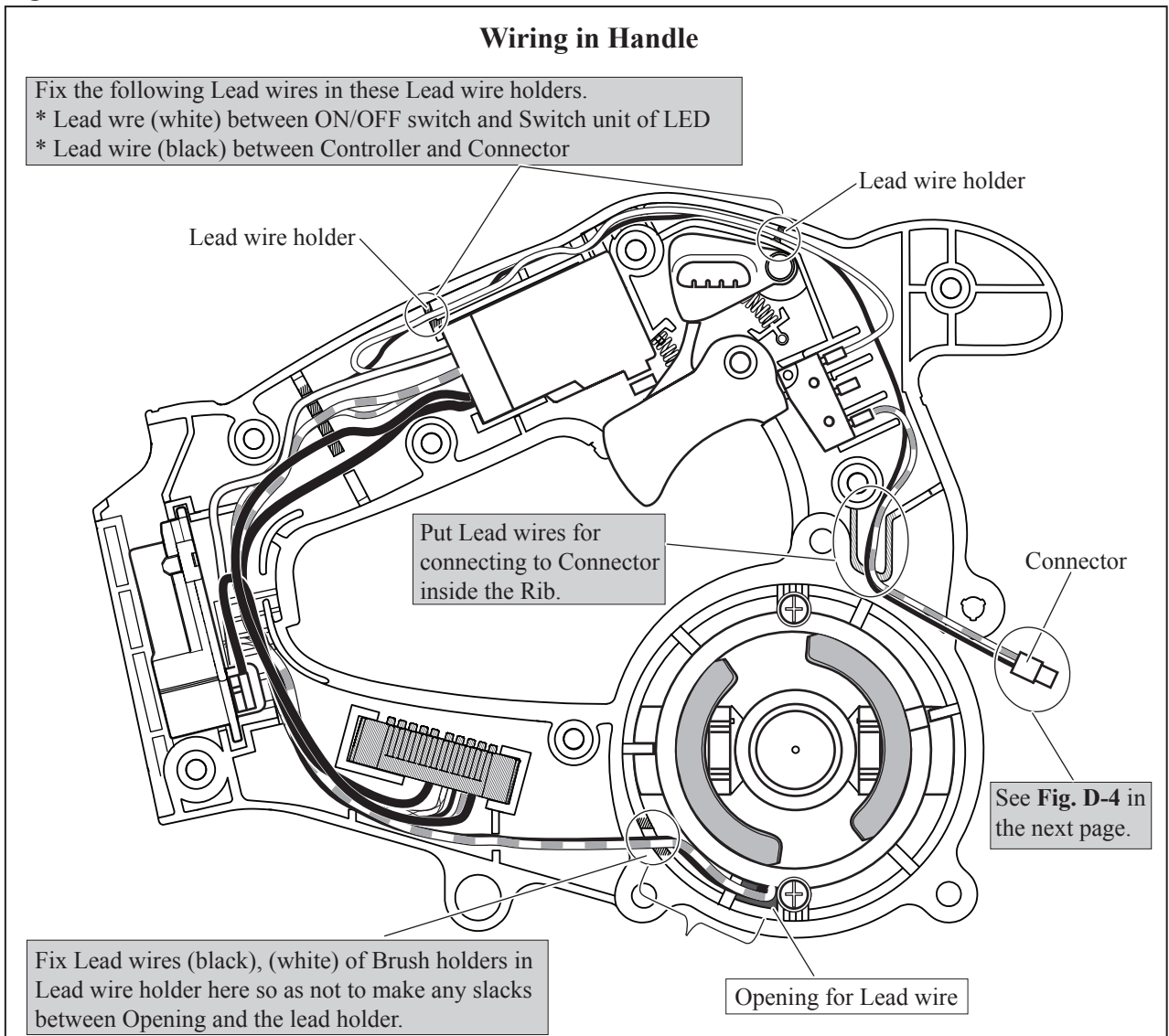


► **Wiring diagram**

**Fig. D-2**



**Fig. D-3**



▶ **Wiring diagram**

Fig. D-4

